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Netherlands Institute for Radio Astronomy

Subrack Assembly and Testing

CS-1 Meeting
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ASTRON is part of the Netherlands Organisation for Scientific Research (NWO)

Subrack Assembly



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- Warehouse: Excel Assemblies in Emmen

- Subrack contains

- 32 RCU boards

- 4 RSP boards

- 2 TBB boards

- 1 TDS board

- 1 JTAG board

- 1 SPU board

- Flashen RSP & TBB

- Subrack test

- Subrack barcode scanprocedure



Flash Firmware (RSP & TBB)



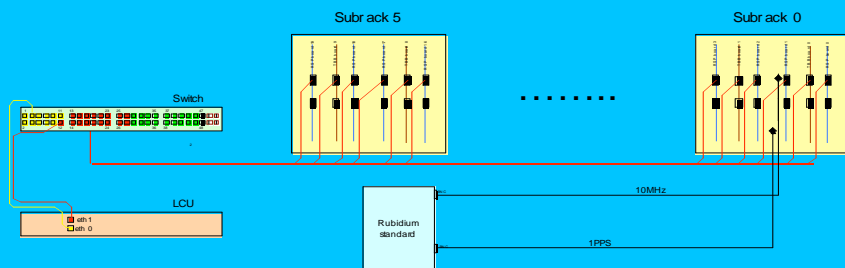
- 4 RSP boards (image 1)
 - image 0 contains low-power version
- 2 TBB boards (image 0 & 1)
 - image 0 contains low-power version
 - image 1 contains latest stable version
- TBB image 0 is write protected !!
(so for 15 years the same image)
- After correct flash firmware → subrack test

Subrack Testing



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Subrack Test System



Subrack Testing



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Subrack Test Results



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DE
DE
DE
DE
DE
DE
DE
DE
DE
DE
DE
DE

- Total time about 9 minutes (flash firmware & test)

Barcode scanning Subrack



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Crab - Subrack Assembly

File Help

ASTRON Subrack Assembly

Components: 43

Subrack & Digital Boards Recover Boards

Save as XML

Subrack

Choose Subrack:

SLBSP0

Subrack:

SLBSP0-00001-00010

00010

Part:

PART0-00001-00010

00010

Digital Boards

SP0	JTB	
SLP-00001-00001	JTB-00001-00001	
00001	00001	
RSP3	TMR	
RSP-00001-00013	TMR-00001-00011	
00013	00011	
RSP2	TDS	
RSP-00001-00018	TDS-00001-00001	
00018	00001	
RSP1	TMR	RSP0
RSP-00001-00011	TMR-00001-00013	RSP-00001-00012
00011	00013	00012

Restart SAVE as XML

Barcode scanning Subrack



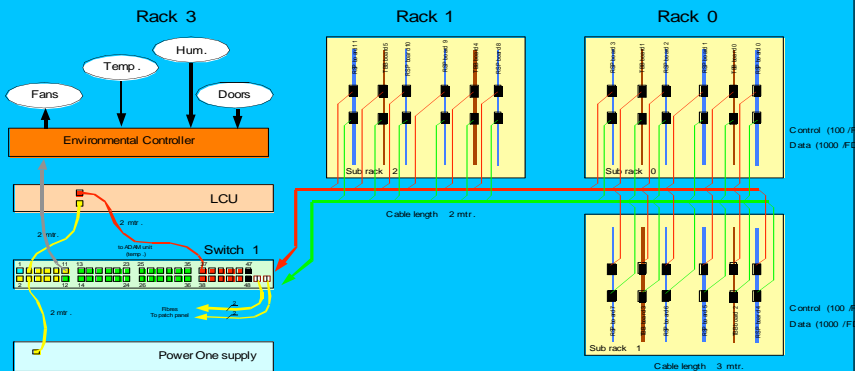
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Station Test (NL: Remote/Core)



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Station Test (NL: Remote/Core)



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1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

- Station pre-testing is ready

Station Test (NL: Remote/Core)



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